

IN THE CLAIMS

1. (Original) A method of molding a disk, comprising injection molding a polymeric material at a melt temperature of about 330 to about 370°C into a mold having a mold temperature of about 90 to about 130°C and a clamp tonnage of about 12 to about 35 tons to form a disk.

2. (Original) The method of claim 1, wherein a disk assembly fabricated from the disk exhibits a radial tilt change value after 96 hours at 80°C of less than or equal to about 0.35 degree measured at a radius of 55 millimeters.

3. (Original) The method of claim 1, wherein a disk assembly fabricated from the disk exhibits a radial tilt change value after 96 hours at 80°C of less than or equal to about 0.15 degree measured at a radius of 55 millimeters.

4. (Original) The method of claim 1, wherein the melt temperature is of about 340 to about 360°C.

5. (Original) The method of claim 1, wherein the mold temperature is of about 100 to about 120°C.

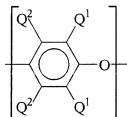
6. (Original) The method of claim 1, wherein the clamp tonnage is of about 15 to about 30 tons.

7. (Original) The method of claim 1, wherein the disk exhibits a percent feature replication of greater than or equal to about 90 percent.

8. (Original) The method of claim 1, wherein the disk exhibits a percent feature replication of greater than or equal to about 95 percent.

9. (Original) The method of claim 1, wherein the polymeric material comprises poly(arylene ether) and poly(alkenyl aromatic).

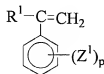
10. (Original) The method of claim 9, wherein the poly(arylene ether) comprises a plurality of structural units of the structure



wherein for each structural unit, each Q^1 is independently halogen, primary or secondary C_1 - C_7 alkyl, phenyl, haloalkyl, aminoalkyl, hydrocarboxy, or halohydrocarboxy wherein at least two carbon atoms separate the halogen and oxygen atoms; and each Q^2 is independently hydrogen, halogen, primary or secondary lower alkyl, phenyl, haloalkyl, hydrocarboxy, or halohydrocarboxy wherein at least two carbon atoms separate the halogen and oxygen atoms.

11. (Original) The method of claim 9, wherein the poly(arylene ether) has an intrinsic viscosity of about 0.10 to about 0.60 deciliters per gram as measured in chloroform at 25°C.

12. (Original) The method of claim 9, wherein the poly(alkenyl aromatic) contains at least 25% by weight of structural units derived from an alkenyl aromatic monomer of the formula



wherein R^1 is hydrogen, C_1 - C_8 alkyl, or halogen; Z^1 is vinyl, halogen or C_1 - C_8 alkyl; and p is 0 to 5.

13. (Original) The method of claim 9, wherein the poly(alkenyl aromatic) is atactic crystal polystyrene.

14. (Original) The method of claim 9, wherein the poly(arylene ether) is present in the polymeric material in an amount of about 60 to about 40 percent by weight and the poly(alkenyl aromatic) is present in the polymeric material in an amount of about 40 to about 60 percent by weight based on the total weight of the poly(arylene ether) and the poly(alkenyl aromatic).

15. (Original) The method of claim 1, wherein the disk is a data storage disk.

16. (Original) A laminate data storage assembly fabricated from a disk formed by the method of claim 1.

17. (Original) A method of molding a disk, comprising injection molding a polymeric material at a melt temperature of about 330 to about 370°C into mold having a mold temperature of about 90 to about 130°C and a clamp tonnage of about 12 to about 35 tons to form a disk, wherein the polymeric material comprises poly(2,6-dimethyl-1,4-phenylene oxide) and polystyrene.

18. (Original) A method of molding a disk, comprising:

injection molding a polymeric material to form disks according to a molding model comprising molding parameters and molding parameter values;

testing disk assemblies fabricated from the disks for radial tilt change;

creating an updated molding model based on the molding parameter values that resulted in disk assemblies fabricated from the disks having a radial tilt change within a selected range of values; and

repeating the molding, testing and creating steps to form final disks and a final molding model, wherein disk assemblies fabricated from the final disks exhibit a radial tilt change value after aging of less than or equal to about 0.35 degree measured at a radius of 55 millimeters.

19. (Original) The method of claim 18, wherein the testing comprises aging the disk assemblies at 80°C for 96 hours.

20. (Original) The method of claim 18, wherein the disk assemblies fabricated from the final disks exhibit a radial tilt change value after 96 hours at 80°C of less than or equal to about 0.35 degree measured at a radius of 55 millimeters.

21. (Original) The method of claim 18, wherein the disk assemblies fabricated from the final disks exhibit a radial tilt change value after 96 hours at 80°C of less than or equal to about 0.15 degree measured at a radius of 55 millimeters.

22. (Original) The method of claim 18, further comprising

testing the disks for percent feature replication;

creating the updated molding model based on the molding parameter values that resulted in disks exhibiting a percent feature replication within a selected range of values; and

repeating the molding, testing and creating steps until the final disks exhibit a percent feature replication of greater than or equal to about 90 percent.

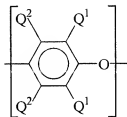
23. (Original) The method of claim 22, wherein the final disks exhibit a percent feature replication of greater than or equal to about 95%.

24. (Original) The method of claim 18, wherein the molding parameters are melt temperature, mold temperature, clamp tonnage, hold pressure, cool time, or a combination thereof.

25. (Original) The method of claim 18, wherein the polymeric material is polycarbonate, poly(arylene ether); poly(alkenyl aromatic); polyolefins; diene-derived polymers; polyacrylamide; polyamides; polyesters; polyesterarbonates; polyethersulfones; polyetherketones; polyetherimides; copolymers thereof; or blends of the foregoing.

26. (Original) The method of claim 18, wherein the polymeric material comprises poly(arylene ether) and poly(alkenyl aromatic).

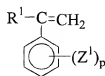
27. (Original) The method of claim 26, wherein the poly(arylene ether) comprises a plurality of structural units of the structure



wherein for each structural unit, each Q^1 is independently halogen, primary or secondary C_1 - C_7 alkyl, phenyl, haloalkyl, aminoalkyl, hydrocarboxy, or halohydrocarboxy wherein at least two carbon atoms separate the halogen and oxygen atoms; and each Q^2 is independently hydrogen, halogen, primary or secondary lower alkyl, phenyl, haloalkyl, hydrocarboxy, or halohydrocarboxy wherein at least two carbon atoms separate the halogen and oxygen atoms.

28. (Original) The method of claim 26, wherein the poly(arylene ether) has an intrinsic viscosity of about 0.10 to about 0.60 deciliters per gram as measured in chloroform at 25°C.

29. (Original) The method of claim 26, wherein the poly(alkenyl aromatic) contains at least 25% by weight of structural units derived from an alkenyl aromatic monomer of the formula



wherein R^1 is hydrogen, C_1 - C_8 alkyl, or halogen; Z^1 is vinyl, halogen or C_1 - C_8 alkyl; and p is 0 to 5.

30. (Original) The method of claim 26, wherein the poly(arylene ether) is present in the polymeric material in an amount of about 90 to about 10 percent by weight and the poly(alkenyl aromatic) is present in the polymeric material in an amount of about 10 to about 90 percent by weight based on the total weight of the poly(arylene ether) and the poly(alkenyl aromatic).

31. (Original) A data storage disk formed by the method of claim 18.

32. (Original) A laminate data storage assembly fabricated from the final disk formed by the method of claim 18.